

REMARKS/ARGUMENTS

The non-final Office Action of April 6, 2007, has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested. Claim 99 has been added. Claims 81-99 remain pending.

Claims 81-83, 86-89, and 92 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Maarek et al. ("Emphemeral Document Clustering for Web Applications," IBM Research Report, RJ 10186, April 2000, hereinafter referred to as Maarek) in view of Call (U.S. Published App. No. 2002/0143521, hereinafter referred to as *Call*). Claims 84-85 and 90-91 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Maarek in view of *Call* and further in view of Liddy et al. (U.S. Patent No. 5,873,056, hereinafter referred to as *Liddy*). Claims 93 and 95-98 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Maarek in view of *Call* in view of *Liddy* and further in view of Dorocak (Dorocak et al. "Conditional Syntactic Specification," Proceedings of the Annual Conference, August 1973, pages 101-105, hereinafter referred to as *Dorocak*). Claim 94 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Maarek in view of *Call* in view of *Liddy* in view of *Dorocak* and further in view of De Bellis (U.S. Patent No. 6,760,720, hereinafter referred to as *De Bellis*). Applicants respectfully traverse.

Improper Rejection of Dependent Claims 95 and 96

Initially, Applicants note that the rejection of dependent claims 95 and 96 is improper. Applicants' dependent claims 95 and 96 each depend from claim 94. In rejecting claim 94, the Action admits that, "Maarek in view of *Call* and further in view of *Libby* and further in view of *Dorocak* does not explicitly teach the limitation: 'wherein any predicate structure of said M predicate structures that includes more than q arguments omits remaining arguments after q argument positions are filled.'" (Action, p. 12). In response, the Action relies on *De Bellis*. However, dependent claims 95 and 96, which depend from claim 94, stand rejected only under Maarek in view of *Call* in view of *Liddy* and further in view of *Dorocak*. As admitted by the Action, the combination of these references fails to teach or suggest all of the features of claim

94. Thus, as claims 95 and 96 depend from claim 94, the same combination of references fails to teach or suggest all of the features of Applicants' claim 95 and 96. Withdrawal of the improper rejection is respectfully requested.

Rejections under 35 U.S.C. § 103(a)

In order to establish a *prima facie* case of obviousness under § 103(a), three criteria must exist: 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings; 2) there must be a reasonable expectation of success; and 3) the prior art reference(s) must teach or suggest all the claim limitations. *See* MPEP § 706.02 (j); *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

With respect to the third criterion, the combination of *Call* and *Maarek* fails to teach or suggest each and every feature of Applicants' claim 81 for several features. Applicants' claim 81 recites, among other features, "identifying at least one predicate and argument in said set of document predicate structures" (emphasis added). As admitted by the Action, *Maarek* fails to teach or suggest this feature (Action, p. 4). In response, the Action relies on *Call*.

In rejecting this feature, the Action relies on paragraph [0117] of *Call*. (Action, p. 5). However, neither this paragraph, nor any other paragraph in *Call*, describes Applicants' feature of a set of document predicate structures. The noted paragraph [0117] of *Call* describes how item types may be grouped to form a set. An example is provided of how item types "apple" and "orange" may be collected together to form a set named "treefruit." However, a *Call* "item" is not a document predicate structure. Predicate structures are known by those skilled in the art to contain a predicate, which is either a verb or preposition, and a set of arguments, each of which may be any part of speech (Applicants' original specification, p. 13, ll. 3-7). There is no teaching or suggestion in *Call* of a set of document predicate structures. A set of item types, such as "apple" and "orange" to form a set of "treefruit" is not a set of document predicate structures.

Still further, as admitted by the Action, *Maarek* fails to teach or suggest “by subtracting corresponding ones of said predicate keys” (Action, p. 4). In response, the Action again relies on *Call* for support. Under the *Call* system, “a sequence of one or more integers is used to represent the character data in natural language text, including the natural language text data in XML document” (P. 5, para. [0068]). *Call* fails to teach or suggest Applicants’ claim 81 feature of, “estimating conceptual nearness of two of said document predicate structures in said set of document predicate structures by subtracting corresponding ones of said predicate keys.” *Call* describes how ordered collections of items called “sets” may be created by query (filter) mechanisms and stored. (P. 5, para. [0071] and p. 1, para. [0117]). As with the previous Office Actions, in rejecting this feature, the Action fails to provide any evidence within *Call* or any other reference and merely states that, “it is inherent in *Call*’s method that conceptual nearness is obtained by subtracting corresponding one of predicate keys.” (Action, p. 5). With respect to *Call*, paragraph [0117] on page 11, as cited in the Action, provides numerous manners to generate a set of items. As described, all items of the same item type may be collected in one set, or may be collected based upon a common attribute. (P. 11, para. [0117]). The same paragraph [0117] states that, “[t]hese and other features of sets, and the mechanisms provided to create, sort, combine and process the members of such sets, will be described in more detail later.”

However, none of the remaining paragraphs of *Call* or any other portion describes Applicants’ feature of “estimating conceptual nearness of two of said document predicate structures in said set of document predicate structures by subtracting corresponding ones of said predicate keys.” In fact, subtraction of integers is not described at all in *Call*. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, (Fed. Cir 1993). “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). See MPEP section

2112. Therefore, absent rationale or evidence tending to show inherency, it is not inherent in *Call*'s method that conceptual nearness is obtained by subtracting corresponding one of predicate keys as expressed in the Action. If such an inherency argument is maintained, Applicants again respectfully request evidence to support such a contention.

In addition, Applicants' claim 81 recites, among other features, "identifying at least one predicate and argument in said set of document predicate structures by a predicate key that is an integer representation." In rejecting these features, the Action relies on various portions of *Maarek*. (Action, p. 4). *Maarek* fails to teach or suggest this feature.

The cited portions of *Maarek* describe an indexing unit that can be a single term, complex form, or lexical constructs (p. 5, para. 4) and a lexical affinity (p. 7, last para. to p. 8, first para.). However, neither the cited portions nor any other portion of *Maarek* describes "identifying at least one predicate and argument in said set of document predicate structures." *Maarek*, like *Call*, describes processing of natural language text, not identification and estimation based upon document predicate structures. As such, the combination of *Call* and *Maarek* fails to teach or suggest each and every feature of Applicants' claim 81 and withdrawal of the rejection is respectfully requested.

Applicants' claim 87 includes similar features as recited above with respect to Applicants' claim 81. As such, claim 87 is allowable over the combination of *Call* and *Maarek* for at least similar reasons as stated above with respect to claim 81.

Dependent claims 82-83 and 88-89, which depend from claims 81 and 87, are allowable over the art of record for at least the same reasons as described above with reference to their ultimate base claim and further in view of the novel features recited therein. For example, Applicants' claim 86 recites, among other features, "wherein said set of document predicate structures are representations of logical relationships between words in a sentence." *Maarek*, like *Call*, fails to teach or suggest such a feature.

Applicants' new claim 99, which depends from claim 81, is fully supported by Applicants' original specification and allowable over the combination of references for at least the same reasons as its ultimate base claim and further in view of the novel features recited

therein. For example, the combination of references fails to teach or suggest, “wherein each of said document predicate structures in said set includes a predicate and a set of arguments, wherein the predicate is one of a verb and a preposition.”

Liddy fails to cure the deficiencies of *Call* and *Maarek* as noted above with respect to Applicants’ claims 81 and 87. As such, Applicants’ claims 84-85 and 90-91, which depend from claims 81 and 87, are allowable over the combination of references for at least the same reasons as their ultimate base claim.

Applicants’ claim 93 includes similar features as recited above with respect to Applicants’ claims 81 and 87. *Dorocak* fails to cure the deficiencies of *Call*, *Maarek*, and *Liddy*, as described above with respect to Applicants’ claims 81-92. As such, claim 93 is allowable over the combination of references for at least similar reasons as stated above with respect to claims 81-92. In addition, Applicants’ claim 93 recites, among other features, “determining a fixed number of arguments q for vector construction.” For support in rejecting this feature, the Action cites page 104 and lines 38-45 of *Dorocak* and states that this feature is “specified in [the] corresponding definition” (Action, p. 9). However, with respect to arguments, the “definition” in *Dorocak* merely states modifying “the specifications relating to the correspondence between the number of arguments in a procedure reference and the number of parameters in a procedure definition.” (*Dorocak*, p. 104). Neither the cited portion nor any other portion of *Dorocak* recites Applicants’ claim 93 feature of, “determining a fixed number of arguments q for vector construction.” As such, Applicants’ claim 93 is patentably distinct over the art of record for at least this additional reason.

Applicants’ claims 95-98, which depend from claim 93, are allowable over the combination of references for at least the same reasons as their ultimate base claim. *De Bellis* fails to cure the deficiencies of *Call*, *Maarek*, *Libby*, and *Dorocak* as noted above with respect to Applicants’ claim 93. As such, Applicants’ claim 94, which depends from claim 93, is allowable over the combination of references for at least the same reasons as its ultimate base claim and further in view of the novel features recited therein.

CONCLUSION

All rejections having been addressed, Applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicits prompt notification of the same. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below. Applicants look forward to passage to issue of the present application at the earliest convenience of the Office.

Respectfully submitted,
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